

ATOFINA Petrochemicals, Inc.

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SEP 23 2004

Attention: Examiner Pasterczyk
Company: USPTO
From: Tenley Krueger
Date: September 23, 2004
Fax Number: 703-872-9306

Number of Pages: (including this one) 3

Examiner Pasterczyk:

Attached is a summary of points we would like to discuss during our interview on September 28th at 12:45. Expert Ken Blackmon will also be in attendance and we look forward to meeting with you.

Serial No. 10/692,068

Title: New Catalyst Structure for Olefin Polymerization

Filed: October 23, 2003

Serial No. 10/178,620

Title: Polyolefin Production with a High Performance Support for a Metallocene Catalyst System

Filed: May 28, 2004



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	§
Razavi, et al.	§
Serial No.: 10/692,068	§ Group Art Unit: 1755
Confirmation No.: 7292	§
Filed: October 23, 2003	§ Examiner: Pasterczyk
For: New Catalyst Structure for Olefin Polymerization	§ § § § §

DRAFT RESPONSE TO OFFICE ACTION DATED JULY 13, 2004

In response to the Office Action dated July 13, 2004, the following points are proposed for consideration and discussion.

DISCUSSION POINTS

PROPOSED CLAIM AMENDMENTS:

13. A catalyst system comprising ~~an activated bridged compound having the formula:~~



wherein M is a metal; each X is an atom or group ~~covalently or ionically~~ bonded to M and may be the same or different; R₁ and R₂ may be the same or each may be different and are substituted or unsubstituted cyclopentadienyl ~~groups or aromatic rings~~; R_B is a structural bridge between ~~the cyclopentadienyl or aromatic rings~~ R₁ and R₂ and imparts stereorigidity to the rings, and comprises at least one heteroatom bonded to M, with each of R₁ and R₂ bonded to the same or different heteroatom of R_B which heteroatom is also bonded to M; Z is the coordination number of M and is greater than or equal to 4; m is the number of bonds between M and heteroatoms of R_B and to impart stereorigidity m≥2;

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and with R₁, R₂ and R_B selected to provide a catalyst component with C₁, C₂ or C_S symmetry.

CLAIM REJECTIONS:

a. **No 5 member ring**

Tohi I, *Tohi II* and the other cited articles teach R₅ and R₆ (corresponding to the current claim's R₁ and R₂) as substituted 6 member rings. See, 415 structures listed in *Tohi I*. In contrast, amended claim 13 recites cyclopentadienyl rings (rather than 6 member rings) R₁ and R₂, which are bonded to the same or different heteroatom of R_B which heteroatom is also bonded to M. None of the over 415 structures taught by *Tohi* include a cyclopentadienyl group bonded to a bridge. In fact, *Tohi* actually teaches away from cyclopentadienyl groups by showing only 6 member rings.

Accordingly, Applicants respectfully submit that the claims are in condition for allowance and respectfully request the same.

Respectfully submitted,

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